REPORTS ON THE FLORA OF THE BOSTON DISTRICT,— I.

Over a year ago the New England Botanical Club decided to collect information in regard to the plants growing within 25 miles of Boston. This district was afterward extended, so that it runs northward to the New Hampshire line; west to include Dunstable, Groton, and Ayer; then southward along the Worcester county line, including Southboro, to Bellingham, on the Rhode Island boundary; thence eastward to the coast at Duxbury. The district thus formed is a good geographical unit, bounded by the New Hampshire line, the hill country of central Massachusetts, and the level sand-plain and morainal territory of southern Bristol and Plymouth counties. It therefore seems that it should possess a definite flora of its own, distinct in many ways from regions to the north, west and south.

The committee in charge has gathered a large amount of data in regard to the ferns of this district, which has been condensed into the present form for publication. This list is still regarded as a preliminary one, and any additions or corrections will be welcomed. There is especial lack of information in regard to the outlying towns of the region, in the south and west portions.

Card-records have been received regarding the ferns of this district from the Gray Herbarium, the Ames Botanical Laboratory, and the herbaria of Tufts College, the New England Botanical Club, the Boston Society of Natural History, the Appalachian Club, and the Bridgewater State Normal School. The following individual collectors have also furnished cards recording the ferns in their collections: Dr. C. A. Cheever, Hon. J. R. Churchill, J. A. Cushman, Walter Deane, Raynal Dodge, A. A. Eaton, F. G. Floyd, T. O. Fuller, C. H. Knowlton, A. H. Moore, C. H. Morss, A. S. Pease, George O. Tilton, R. A. Ware and E. F. Williams.

Wherever unusual ferns have been reported, the specimens themselves have been examined. Special examination has been made of the ferns in the Gray Herbarium, the Davenport collection of the Massachusetts Horticultural Society, and the herbaria of the New England Botanical Club and the Ames Botanical Laboratory. The Committee wishes to express its indebtedness to Dr. B. L. Robinson of the Gray Herbarium for advice and assistance in preparing this report.

POLYPODIACEAE.

POLYPODIUM.

P. vulgare L. Dry rocks and ledges, common.

PHEGOPTERIS.

P. polypodioides (L.) Fée. Damp rich woods; occasional, especially northward.

P. hexagonoptera (Michx.) Fée. Rich open woods, not common. All reports are from the central part of our territory.

P. Dryopteris (L.) Fée. Rich especially coniferous woods; occasional in Essex County, but rare elsewhere; not reported south of Needham.

ADIANTUM.

A. pedatum L. Rich deciduous woods; generally distributed, but only locally abundant.

PTERIS.

P. aquilina L. Dry open woods and uplands, common.

WOODWARDIA.

W. virginica (L.) Sm. Wet woods and peat-bogs, sometimes in water; frequent.

W. areolata (L.) Moore. (*W. angustifolia* Sm.) Swamps and wet woods; frequent within ten miles of tide-water, the stations often extensive.

ASPLENIUM.

A. Trichomanes L. Dry ledges; frequent, but never abundant in our range.

A. platyneuron (L.) Oakes. (*A. ebeneum* Ait.) Rocky soil and ledges throughout.

Var. **serratum** (E. S. Miller) BSP. One specimen, collected in Malden by Mr. George E. Davenport in 1872 and identified by Dr. Asa Gray, is now in the Gray Herbarium; and another, from Melrose, is in the Davenport Collection.

A. acrostichoides Sw. (*A. thelypteroides* Michx.) Rich woods; occasional in the northern towns, less frequent southward.

A. Filix-femina (L.) Bernh. Usually in damp woods and shaded places, though occasionally in drier situations; common and varying much with the conditions of soil, moisture, and shade. Var. **angustum** (Willd.) D. C. Eaton. Woods, occasional.

CAMPTOSORUS.

C. rhizophyllus (L.) Link. Granite ledges, Needham, where observed as early as 1877; formerly also on Doublet Hill, Weston.

POLYSTICHUM.

P. acrostichoides (Michx.) Schott. (*Aspidium acrostichoides* Sw.) Rocky woods, distributed here and there, but not very common. Var. **Schweinitzii** (Beck) Small. (Var. *incisum* Gray.) Amesbury (*J. W. Huntington*); Andover (*A. S. Pease*); Blue Hills (*E. F. Williams*).

ASPIDIUM.

A. Thelypteris (L.) Sw. Swamps, common everywhere.

Forma **Pufferae** (A. A. Eaton) B. L. Robinson in herb. *Nephrodium Thelypteris*, forma *Pufferae* A. A. Eaton. Border of meadows, Sudbury (*Mrs. J. J. Puffer*). See Eaton, Fern Bull. x, 78.

A. simulatum Davenp. Swampy woods; locally abundant; often associated with the preceding and with *Woodwardia areolata*. See Davenp. Bot. Gaz. xix. 494, 495.

A. noveboracense (L.) Sw. Low open woods, common.

A. marginale (L.) Sw. Rocky woods, common throughout. Var. ELEGANS J. Robinson (Bull. Essex Inst. vii. 51) is a luxuriant form with the pinnules more deeply crenate-toothed. This form not very sharply distinguishable from the type has been found at Ipswich (*Oakes*), Swampscott (*J. Robinson*), and Milton (*F. G. Floyd*).

A. Boottii Tuckerm. Low woods, frequent.

A. cristatum (L.) Sw. Open and wooded swamps; frequent: reported as abundant in Brockton, Easton, and in northern Essex County.

Var. **Clintonianum** D. C. Eaton. Wooded swamps, occasional; not reported from open land. Not so extreme as the more northern and western specimens.

A. cristatum × **marginale** Davenp. Where swamps meet the rocky woods, rare. First described by Mr. Davenport from northern Essex County; Boxford, Merrimac, Salisbury, Medford, Byfield, Brockton; see Davenp. Bot. Gaz. xix. 494, 495.

A. spinulosum (O. F. Müller) Sw. Low open woods, frequent.

Var. **intermedium** (Muhl.) D. C. Eaton. Rich woods, frequent.

Var. **dilatatum** (Hoffm.) Hook. Swampy woods, fairly plentiful at Brockton (A. A. Eaton).

Forma **anadenium** B. L. Robinson.[1] This form, characterized by a glandless or essentially glandless indusium, includes the greater part of what has heretofore passed as var. *dilatatum* in America. It may be distinguished from the typical *A. spinulosum* by the narrower firmer and darker brown scales of the stipes and from var. *intermedium* by its broader ovate fronds and glandless indusium. In our region it is relatively rare and never quite so characteristic as in mountain specimens. Reports indicate that it has been found in Chelsea, Dedham, Manchester, and Woburn.

Var. **concordianum** (Davenp.) Eastman. Rich swampy woodland, Concord (*Purdie & Brewster, Davenport & Purdie*). See Rhodora, vi. 31–33.

CYSTOPTERIS.

C. fragilis (L.) Bernh. Moist or wet rocks and ledges in shade; not common, especially southward.

[1] Concerning this form Dr. Robinson makes the following statement: "*Aspidium spinulosum*, var. *dilatatum* (Hoffm.) Hook., as it occurs in Europe, regularly exhibits a glandular indusium, a fact substantiated by specimens and by the statements of several critical and reliable authors, such as Moore, Milde, Christ, and others. This European form must be regarded as the typical state of the variety. Until recently it has been almost unknown in America. To it seems to belong, however, the plant not long since described as *Nephrodium spinulosum*, var. *fructuosum* Gilbert, and study of a considerable suite of American specimens referred to Var. *dilatatum* shows that the indusium is occasionally glanduliferous as in the European plant. Nevertheless, as Prof. D. C. Eaton long ago remarked the indusium in the American Var. *dilatatum* is habitually glandless. This glandless form, which is readily recognizable with a good lens, seems never to have had a distinctive name and may therefore be called A. SPINULOSUM, VAR. DILATATUM, forma **anadenium,** n. f. indusio glandulis fere vel omnino destituto.— As an appropriate type-specimen for this new form I would mention a plant collected in deciduous woods, alt. 760 m., 14 August, 1895, on Barren Mt., Elliottsville Piscataquis County, Maine, by M. L. Fernald, no. 426 (type in hb. Gray; cotypes in several public and private herbaria). Forma *anadenium* is widely distributed in Atlantic North America, chiefly in mountainous regions."

WOODSIA.

W. ilvensis (L.) R. Br. Exposed dry ledges, occasional.
W. obtusa (Spreng.) Torr. Shaded ledges; scattered stations throughout.

DICKSONIA.

D. punctilobula (Michx.) Gray. (*D. pilosiuscula* Willd.) Moist soil in open places and light shade; common.

ONOCLEA.

O. sensibilis L. Damp woods and meadows, abundant.
O. Struthiopteris (L.) Hoffm. Moist soil, usually in shade; rare; not reported south of Boston.

LYGODIUM.

L. palmatum (Bernh.) Sw. Low thickets, rare. Carlisle, Concord, Dover (1883, 1884), Saugus (1885), Newton; the last three stations probably extinct.

OSMUNDA.

O. regalis L. Swamps, wet woods, and lake shores; common.
O. Claytoniana L. Somewhat less common than the following species.
O. cinnamomea L. Swamps and low woods, common. The formal var. FRONDOSA Gray is occasionally found with the typical form.

OPHIOGLOSSACEAE.

OPHIOGLOSSUM.

O. vulgatum L. Moist fields and pastures, local.

BOTRYCHIUM.

B. simplex E. Hitchcock. Low woods; Amesbury, Byfield, Easton, Salisbury, W. Newbury.
B. lanceolatum (Gmel.) Ångstr., var. **angustisegmentum** Pease & Moore. Low woods, rare; stations occasionally large. See Rhodora, viii. 229.
B. ramosum (Roth) Aschers. (*B. matricariaefolium* A. Br.) Low woods; Amesbury, Dedham, Natick, Needham, Salisbury, W. Newbury.

B. obliquum Muhl. Old fields and pastures; occasional, and locally abundant.

Var. **elongatum** Gilbert & Haberer. Georgetown (*Mrs. C. S. N. Horner*, specimen in hb. N. E. Bot. Club, also in the Davenport Collection).

Var. **dissectum** (Spreng.) Clute. Old fields and pastures, frequent.

B. ternatum (Thunb.) Sw., var. **intermedium** D. C. Eaton. Old fields, pastures, and rarely in woods; frequent.

B. virginianum (L.) Sw. Rich woods, occasional.

A. K. Harrison, (Chairman)
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C. H. Knowlton,
R. A. Ware.
} *Committee on local flora*

PRELIMINARY LISTS OF NEW ENGLAND PLANTS,—XX. SPARGANIACEAE.[1]

M. L. Fernald and A. J. Eames.

[The sign + indicates that an herbarium specimen has been seen; the sign — that a reliable printed record has been found.]

	Me.	N. H.	Vt.	Mass.	R. I.	Conn.
Sparganium americanum Nutt.	+	—	+	+	+	+
" " var. androcladum (Engelm.) Fernald & Eames	+	+	+	+	+	+
" angustifolium Michx.	+	+	+	+		+
" diversifolium Graebner	+	+	+	+		+
" " var. acaule (Beeby) Fernald & Eames	+	+	+			+
" eurycarpum Engelm.	+	—	+	+	+	+
" fluctuans (Morong) Robinson	+	+	+	+		+
" lucidum Fernald & Eames				+		
" minimum Fries	+		+	+		+
" simplex Hudson	+		+			

[1] Printed in Rhodora as supplementary material.